PARTS REPLACEMENT MANUAL FOR

DODGE® TORQUE-ARM TM

Speed Reducers Straight Bore & Taper Bushed

TXT/HXT 309A - 315A - 325A TXT/HXT 409A - 415A - 425A TXT/HXT 509B - 515B - 525B TXT/HXT 609 - 615 - 625 TXT/HXT 709 - 715 - 725

> TXT/HXT 305A TXT/HXT 405A TXT/HXT 505A TXT 605 TXT 705

WARNING: Because of the possible danger to persons(s) or property from accidents which may result from the improper use of products, it is important that correct procedures be followed. Products must be used in accordance with the engineering information specified in the catalog. Proper installation, maintenance and operation procedures must be observed. The instructions in the instruction manuals must be followed. Inspections should be made as necessary to assure safe operation under prevailing conditions. Proper guards and other suitable safety devices or procedures as may be desirable or as may be specified in safety codes should be provided, and are neither provided by Baldor Electric Company nor are the responsibility of Baldor Electric Company. This unit and its associated equipment must be installed, adjusted and maintained by qualified personnel who are familiar with the construction and operation of all equipment in the system and the potential hazards involved. When risk to persons or property may be involved, a holding device must be an integral part of the driven equipment beyond the speed reducer output shaft.

INSTALLATION

- 1. Use eyebolts or lifting lugs to lift reducer.
- 2. Determine the running positions of the reducer. (See Fig. 1) Note that the reducer is supplied with either 4 or 7 plugs; 4 around the sides for horizontal installations and 1 on each face for vertical installations. These plugs must be arranged relative to the running positions as follows:

<u>Horizontal Installations</u> - Install the magnetic drain plug in the hole closest to the bottom of the reducer. Throw away the tape that covers the filter/ventilation plug in shipment and install plug in topmost hole. Of the 3 remaining plugs on the sides of the reducer, the lowest one is the minimum oil level plug.

<u>Vertical Installations</u> - Install the filter/ventilation plug in the hole provided in the top face of the reducer housing. Use the hole in the bottom face for the magnetic drain plug. Of the 5 remaining holes on the sides of the reducer, use a plug in the upper housing half for the minimum oil level plug.

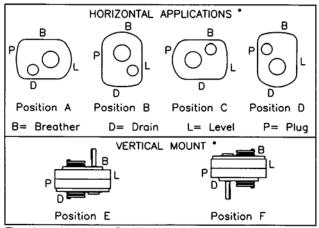


Fig. 1 - Mounting Positions

 Below 15 RPM output speed, oil level must be adjusted to reach the highest oil level plug (P.).

The running position of the reducer in a horizontal application is not limited to the four positions shown in Fig. 1. However, if running position is over 20* in position "B" & "D" or 5* in position "A" & "C", either way from sketches, the oil level plug cannot be used safely to check the oil level, unless during the checking, the torque arm is disconnected and the reducer is swung to within 20* for position "A" & "C" or 5* for position "B" & "D" of the positions shown in Fig. 1. Because of the many possible positions of the reducer, it may be necessary or desirable to make special adaptations using the lubrication filling holes furnished along with other standard pipe fittings, stand pipes and oil level gauges as required.

3. Mount reducer on driven shaft as follows:

<u>WARNING:</u> To ensure that drive is not unexpectedly started, turn off and lock out or tag power source before proceeding. Failure to observe these precautions could result in bodily injury.

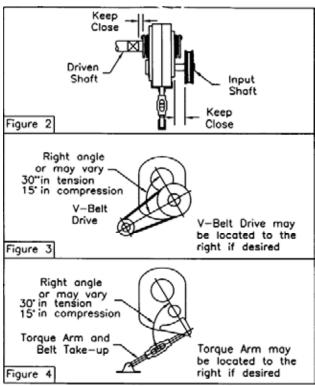
For Straight Bore: Mount reducer on driven shaft as close to bearing as practical. If bushings are used, assemble bushings in reducer first. A set of bushings for one reducer consists of one keyseated bushing and one plain bushing. Extra length setscrews are furnished with the reducer. Driven shaft should extend through full length of speed reducer. Tighten both setscrews in each collar.

For Taper Bushed: Mount reducer on driven shaft per instruction sheet No. 499629 packed with tapered bushings.

- 4. Install sheave on input shaft as close to reducer as practical. (See Fig. 2)
- 5. Install motor and V-belt drive so belt will approximately be at right angles to the center line between driven and input shaft. (See Fig. 3) This will permit tightening the V-belt with the torque arm.
- 6. Install torque arm and adapter plates using the long reducer bolts. The bolts may be shifted to any of the holes on the input end of the reducer.
- 7. Install torque arm fulcrum on a flat and rigid support so that the torque arm will be approximately at right angles to the center line through the driven shaft and the torque arm anchor screw. (See Fig. 4) Make sure that there is sufficient take-up in the turnbuckle for belt tension adjustment when using V-belt drive.

<u>CAUTION</u>: Unit is shipped without oil. Add proper amount of recommended lubricant before operating. Failure to observe this precaution could result in damage to or destruction of the equipment.

8. Fill gear reducer with recommended lubricant. See page 3, table 1.



LUBRICATION

IMPORTANT: Because reducer is shipped without oil, it is necessary to add the proper amount of oil before running. Use a high-grade petroleum base rust and oxidation inhibited (R&O) gear oil - see tables. Follow instructions on reducer warning tags, and in the installation manual.

Under average industrial operating conditions, the lubricant should be changed every 2500 hours of operating or every 6 months, whichever occurs first. Drain reducer and flush with kerosene, clean magnetic drain plug and refill to proper level with new lubricant.

<u>CAUTION:</u> Extreme pressure (EP) lubricants are not recommended for average operating conditions. Failure to observe these precautions could result in bodily injury.

<u>CAUTION:</u> Too much oil will cause overheating and too little will result in gear failure. Check oil level regularly. Failure to observe this precaution could result in bodily injury.

Under extreme operating conditions, such as rapid rise and fall of temperature, dust, dirt, chemical particles, chemical fumes, or oil sump temperatures above 200°F, the oil should be changed every 1 to 3 months, depending on severity of conditions.

<u>CAUTION:</u> Do not use EP oils containing slippery additives such as graphite or molybdenum disulfide in the reducer when backstop is used. These additives will destroy sprag action.

Table 1 - Oil Volumes *
Consult DODGE for proper oil level for reducers with backstops and which are mounted in C-position or D-position.

Reducer		Approximate Volume of Oil Required to Fill Reducer to Oil Level Plug																
Size	Ť	Position	ı A	t	Position	ı B	†	Positior	n C	t	Positior	ı D	†	Position	E	t	Position	F
TXT/HXT	Oz.	▲ Qt.	L	Oz.	▲ Qt.	Г	Oz.	▲ Qt.	L									
305A	28	.88	.83	48	1.50	1.42	44	1.38	1.30	44	1.38	1.30	80	2.50	2.37	100	3.13	2.96
309A 315A 325A	48	1.50	1.42	48	1.50	1.42	24	.75	.71	72	2.25	2.13	84	2.63	2.48	96	3	2.84
405A	48	1.50	1.42	72	2.25	2.13	68	2.13	2.01	60	1.88	1.77	128	4	3.79	166	4.88	4.62
409A 415A 425A	60	1.88	1.77	72	2.25	2.13	40	1.25	1.18	56	1.75	1.66	108	3.38	3.19	136	4.25	4.02
505A	108	3.38	3.19	136	4.25	4.02	124	3.88	3.67	120	3.75	3.54	248	7.75	7.33	288	9	8.52
509B 515B 525B	104	3.25	3.08	128	4	3.79	104	3.25	3.08	128	4	3.79	224	7	6.62	272	8.50	8.04
605	144	4.50	4.3	184	5.75	5.4	144	4.50	4.3	160	5	4.7	384	12	11.4	352	11	10.4
609 615 625	136	4.25	4.0	160	5	4.7	136	4.25	4.0	160	5	4.7	276	8.63	8.2	292	9.13	8.6
705	240	7.50	7.1	288	9	8.5	240	7.50	7.1	296	9.25	8.8	608	19	18	552	17.25	16.3
709 715 725	208	6.50	6.1	256	8	7.6	232	7.25	6.9	296	9.25	8.7	492	15.38	14.6	524	16.38	15.5

- † Refer to Figure 1 on page 2 for mounting positions.
- ▲ U.S. Measure: 1 quart = 32 fluid ounces = .94646 liters.

Table 2 – Oil Recommendations
ISO Grades for Average Operating Conditions

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Ambient Temperatures of 15°F thru 60°F					
6	Reducer Size				
Output RPM	TXT3A-7 HXT3A-7	TXT305A-705 HXT305A-505A			
301–400	220				
201–300	220				
151–200	220 220				
126–150					
101–125	220				
81–100	220				
41–80	220				
11–40	220				
1–10	2	220			

Ambient Temperatures of 50°F thru 125°F						
Output		cer Size				
RPM	TXT3A-7 HXT3A-7	TXT305A-705 HXT305A-505A				
301–400	32	0				
201–300	320					
151–200	320					
126–150	32	0				
101–125	32	0				
81–100	32	0				
41–80	32	0				
11–40	32	0				
1–10	32	0				

Note: If reducer position is to vary from those shown in figure 1, either more or less oil may be required. Consult Dodge. If output is less than 15 RPM, consult Dodge.

• Below 15 RPM output speed, oil level must be adjusted to reach the highest oil level plug (P.).

During periods of long storage, or when waiting for delivery or installation of other equipment, special care should be taken to protect a gear reducer to have it ready to be in the best condition when placed into service.

By taking special precautions, problems such as seal leakage and reducer failure due to lack of lubrication, improper lubrication quantity, or contamination can be avoided. The following precautions will protect gear reducers during periods of extended storage:

Preparation

- 1. Drain the oil from the unit. Add a vapor phase corrosion inhibiting oil (VCI-105 oil by Daubert Chemical Co.) in accordance with Table 3.
- 2. Seal the unit airtight. Replace the vent plug with a standard pipe plug and wire the vent to the unit.

- 3. Cover the shaft extension with a waxy rust preventative compound that will keep oxygen away from the bare metal. (Non-Rust X-110 By Daubert Chemical Co.)
- 4. The instruction manuals and lubrication tags are paper and must be kept dry. Either remove these documents and store them inside or cover the unit with a durable waterproof cover which can keep moisture away.
- 5. Protect reducer from dust moisture, and other contaminants by storing the unit in a dry area.
- 6. In damp environments, the reducer should be packed inside a moisture-proof container or an envelope of polyethylene containing a desiccant material. If the reducer is to be stored outdoors, cover the entire exterior with a rust preventative.

When placing the reducer into service:

- 1. Assemble the vent plug into the proper hole.
- 2. Clean the shaft extensions with petroleum solvents.
- 3. Fill the unit to the proper oil level using a recommended lubricant. The VCI oil will not affect the new lubricant
- 4. Follow the installation instructions provided in this manual

Table 3 - Quantities of VCI #105 Oil

Size	Quarts or Liters
TXT / HXT 3A – 305A	.1
TXT / HXT 4A – 405A	.2
TXT / HXT 5B – 505A	.3
TXT / HXT6 – TXT605	.4
TXT / HXT7 – TXT705	.5

VCI #105 & #10 are interchangeable.

VCI #105 is more readily available.

MOTOR MOUNTS

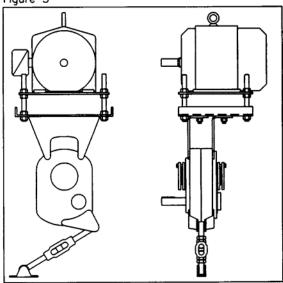
The motor mount must be installed on output end of reducer as shown in Figure 5.

Remove two or three (as required) housing bolts on output end of reducer. Place the motor mount in position and install the longer housing bolts supplied with the motor mount. Tighten bolts to torque specified in Table 4.

Install motor, drive sheave, and driven sheave so that the driven sheave is as close to the reducer housing as practical. Install V-belt and tension with the four adjusting screws provided on the T-A M motor mount.

Check all bolts to see that they are securely tightened.

Figure 5



<u>WARNING</u>: Belt guard removed for illustration purposes. Do not operate if belt guard is not in place.

REPLACEMENT OF PARTS

IMPORTANT: Using tools normally found in a maintenance department, a DODGE TORQUE-ARM speed reducer can be disassembled and reassembled by careful attention to the instructions following.

Cleanliness is very important to prevent the introduction of dirt into the bearings and other parts of the reducer. A tank of clean solvent, an arbor press, and equipment for heating bearings and gears (for shrinking these parts on shafts) should be available.

Our factory is prepared to repair reducers for customers who do not have proper facilities or who, for any reason, desire factory service.

The oil seals are of the rubbing type and considerable care should be used during disassembly and reassembly to avoid damage to the surface which the seals rub on.

The keyseat in the input shaft, as well as any sharp edges on the output hub should be covered with tape or paper before disassembly or reassembly. Also, be careful to remove any burrs or nicks on surfaces of the input shaft or output hub before disassembly or reassembly.

<u>Ordering Parts:</u> When ordering parts for reducer, specify reducer size number, reducer serial number, part name, part number, and quantity.

It is strongly recommended that, when a pinion or gear is replaced, the mating pinion or gear is replaced also.

If the large gear on the output hub must be replaced, it is recommended that an output hub assembly of a gear assembled on a hub be ordered to secure undamaged surfaces on the output hub where the output seals rub. However, if it is desired to use the old output hub, press the gear and bearing off and examine the rubbing surface under the oil seal carefully for possible scratching or other damage resulting from the pressing operation. To prevent oil leakage at the shaft oil seals, the smooth surface of the output hub must not be damaged.

If any parts must be pressed from a shaft or from the output hub, this should be done before ordering parts to make sure that none of the bearings or other parts are damaged in removal. Do not press against outer race of any bearing.

Because old shaft oil seals may be damaged in disassembly, it is advisable to order replacements for these parts.

Removing Reducer from Shaft

<u>CAUTION:</u> Remove all external loads from drive before removing or servicing drive or accessories.

<u>WARNING</u>: To ensure that drive is not unexpectedly started, turn off and lock out or tag power source before proceeding. Failure to observe these precautions could result in bodily injury.

Straight Bore: Loosen screws in both output hub collars. Remove the collar next to the end of the shaft. This exposes three puller holes in the output hub to permit the use of a wheel puller. In removing the reducer from the shaft, be careful not to damage the ends of the hub.

Taper Bushed:

- 1. Remove bushing screws.
- 2. Place the screws in the threaded holes provided in the bushing flanges. Tighten the screws alternately and evenly until the bushings are free on the shaft. For ease of tightening screws, make sure screw threads and threaded holes in bushing flanges are clean.
- 3. Remove the outside bushing, the reducer, and then the inboard bushing.

Disassembly:

- 1. Position the reducer on its side and remove all housing bolts. Drive dowel pins from housing. Gently tap the output hub and input shaft with a soft hammer (rawhide, not a lead hammer) to separate the housing halves. Open housing evenly to prevent damage to the parts inside.
- 2. Lift shaft, gear, and bearing assemblies from housing.
- Remove seals from housing.

Reassembly:

- 1. Output Hub Assembly: Heat gear to 325°F to 350°F to shrink onto hub. Heat bearings to 270°F to 290°F to shrink onto hub. Any injury to the hub surfaces where the oil seals rub will cause leakage, making it necessary to use a new hub.
- 2. Countershaft Assembly: Shaft and pinion are integral. Press gear and bearings on shaft. Press against inner (not outer) race of bearings.
- 3. Input Shaft Assembly: Shaft and pinion are integral. Press bearings on shaft. Press against inner (not outer) race of bearings.
- 4. Drive the two dowel pins into place in the right-hand housing half. Apply RTV732 sealant to carriers for R.H. side(backstop side) of reducer. Install carriers and torque bolts per table 4.

- 5. Place R.H. housing half on blocks to allow for protruding end of output hub.
- 6. Install bearing cups in right-hand housing half, making sure they are properly seated.
- 7. Mesh output hub gear and small countershaft gear together and set in place in housing. Set input shaft assembly in place in the housing. Make sure bearing rollers (cones) are properly seated in their cups. set bearing cups for left-hand housing half in place on their rollers.
- 8. Clean housing flange surfaces on both halves, making sure not to nick or scratch flange face. Place a 1/8 bead of RTV732 sealant on flange face. (make sure RTV is placed between bolt holes and inside of flange face) Place other housing half into position and tap with a soft hammer (rawhide, not lead hammer) until housing bolts can be used to draw housing halves together. Torque housing bolts per torque values listed in table 4.

Table 4 – Recommended Torque Values

	Dry Torque (lbft.)			
Reducer Size	Housing Bolts	Output Hub Seal Carrier Screws		
TXT / HXT 305A & 3A	50-45	17–15		
TXT / HXT 405A & 4A	50-45	30–27		
TXT / HXT 505A & 5B	75–68	30–27		
TXT605 & TXT / HXT 6	75–68	30-27		
TXT705 & TXT / HXT 7	150-135	50-45		

	Dry Torque (lbft.)			
Reducer	C'shaft	Input Shaft		
Size	Bearing Cover	Seal Carrier		
	Screws	Screws		
TXT / HXT 305A & 3A	17–15	17–15		
TXT / HXT 405A & 4A	30–27	30–27		
TXT / HXT 505A & 5B	30–27	30–27		
TXT605 & TXT / HXT 6	30–27	30–27		
TXT705 & TXT / HXT 7	50–45	50–45		

- Place output hub seal carrier in position without shims and install two carrier screws diametrically opposed. Torque each screw to 25 in.-lbs. Rotate the output hub to roll in the bearings and then torque each screw to 50 in.lbs. Again turn output hub to roll in the bearings. With a feeler or taper gage, measure the gap between the housing and the carrier flange. To determine the required shim thickness, take the average of the two feeler gage readings. Remove carrier and install the required shims plus .002. Install carrier with shims and torque bolts per table 4. Rotate hub assy, tap lightly with rawhide mallet on end of hub, while rotating, to ensure bearings are seated. Using a dial indicator check end play of hub bearings, endplay should be .001-.003. Repeat this process as necessary to obtain proper end play. Place a 1/8 diameter bead of RTV732 sealant inside the carrier at the shim I.D. and install carrier on reducer housing. Torque carrier bolts to value shown in Table 4.
- 10. Adjust the countershaft bearings using the same method as in step 8 above. The axial end play should be .001" to .003".
- 11. Again, using the same procedure as in step 8, adjust the input shaft bearings, except the axial end play should be .002" to .004".

- 11. Using gaskets install input shaft cover and counter shaft cover to right-hand housing half. Install input and output seals. Extreme care should be used when installing seals to avoid damage due to contact with sharp edges on the input shaft or output hub. The possibility of damage and consequent oil leakage can be decreased by covering all sharp edges with tape prior to seal installation. Fill cavity between seal lips with grease. Seals should be pressed or tapped with a soft hammer evenly into place in the carrier, applying pressure only on the outer edge of the seals. A slight oil leakage at the seals may be evident during initial running, but should disappear unless seals have been damaged.
- 12. Install bushing backup plates and snap rings on Taper Bushed reducers or hub collars on straight bore reducers.

Table 5 – Manufacturers' Part Numbers for Replacement Output Hub Bearings

	,				
Torque-Arm		Output Bearing			
Reducer Drive Size	Dodge Part No.	Timken Part No.			
TXT/HXT 305A	402272 403127	LM814849 LM814810			
TXT/HXT 309A TXT/HXT 315A TXT/HXT 325A	402272 403127	LM814849 LM814810			
TXT/HXT 405A	402268 403163	498 492A			
TXT/HXT 409A TXT/HXT 415A TXT/HXT 425A	402268 403163	498 492A			
TXT/HXT 505A	402193 403016	42381 42584			
TXT/HXT 509B TXT/HXT 515B TXT/HXT 525B	402193 403016	42381 42584			
TXT605	402050 403140	JM822049 JM822010			
TXT/HXT 609 TXT/HXT 615 TXT/HXT 625	402050 403140	JM822049 JM822010			
TXT705	402058 403111	48290 48220			
TXT/HXT 709 TXT/HXT 715 TXT/HXT 725	402058 403111	48290 48220			

Table 6 – Manufacturers' Part Numbers for Replacement Countershaft Bearings

Torque-Arm	Countershaft Be				
Reducer	Dodge	Timken			
Drive Size	Part Ño.	Part No.			
TXT/HXT 309A TXT/HXT 315A TXT/HXT 325A	402273 403094	15102 15245			
TXT/HXT 409A TXT/HXT 415A TXT/HXT 425A	402000 403000	M86649 M86610			
TXT/HXT 509A	402203	2789			
TXT/HXT 515A TXT/HXT 525A	403027	2769			
TXT/HXT 609	402054	HM807040			
TXT/HXT 615 TXT/HXT 625	403159	HM807010			
TXT/HXT 709	402256	JHM807045			
TXT/HXT 715 TXT/HXT 725	403053	JHM807012			

Table 6 cont'd – Manufacturers' Part Numbers for Replacement Countershaft Bearings

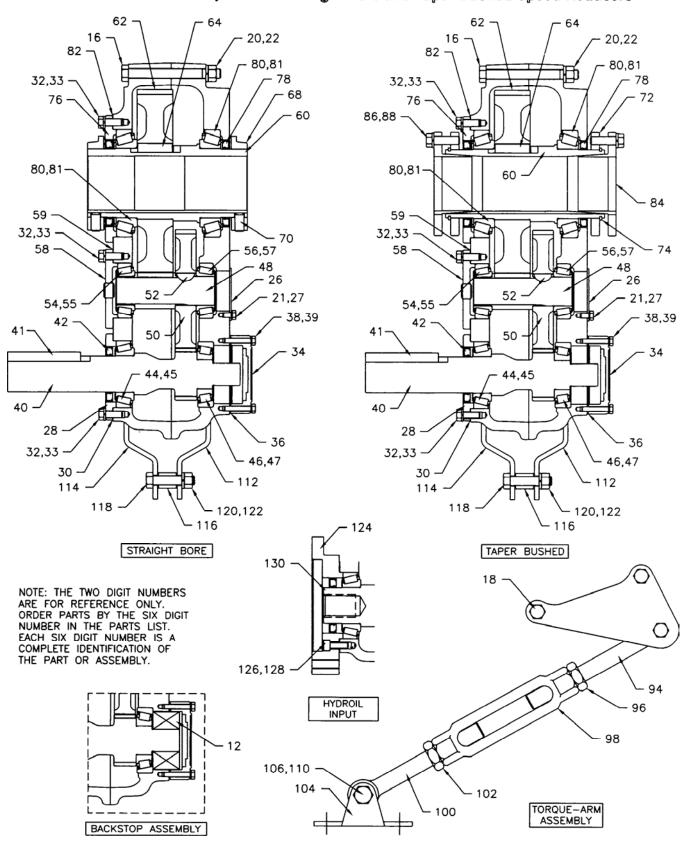
Torque-Arm Reducer	Countershaft Bearing Input Side			
Drive Size	Dodge Part No.	Timken Part No.		
TXT/HXT 309A TXT/HXT 315A TXT/HXT 325A	402273 403094	15102 15245		
TXT/HXT 409A TXT/HXT 415A TXT/HXT 425A	402000 403000	M86649 M86610		
TXT/HXT 509A TXT/HXT 515A TXT/HXT 525A	402203 403027	2789 2720		
TXT/HXT 609 TXT/HXT 615 TXT/HXT 625	402052 403142	HM803149 HM803110		
TXT/HXT 709 TXT/HXT 715 TXT/HXT 725	402256 403053	JHM807045 JHM807012		

Table 7 – Manufacturers' Part Numbers for Replacement Input Bearings

mpat Boaringo		
Torque-Arm	Input Bearing:	s Input Side
Reducer	Dodge	Timken
Drive Size	Part Ño.	Part No.
TXT/HXT 305A	402190	LM603049
1X1/11X1 303A	403132	LM603011
TXT/HXT 309A	402204	LM48548A
TXT/HXT 315A	403139	LM48510
TXT/HXT 325A		
TXT/HXT 405A	402179	368
	403006	362A
TXT/HXT 409A	402280	2788
TXT/HXT 415A	403027	2720
TXT/HXT 425A		
TXT/HXT 505A	402270	45289
	403026	45220
TXT/HXT 509B	402144	28579
TXT/HXT 515B	403104	28521
TXT/HXT 525B		
TXT605	402053	39580
	403106	39520
TXT/HXT 609	402196	395A
TXT/HXT 615	403091	3920
TXT/HXT 625		
TXT705	402057	JH211749
	403143	JH211710
TXT/HXT 709	402150	39590
TXT/HXT 715	403106	39520
TXT/HXT 725		

Torque-Arm	Input Bearings	output Side
Reducer Drive Size	Dodge Part No.	Timken Part No.
TXT/HXT 305A	402271 403101	02872 02820
TXT/HXT 309A TXT/HXT 315A TXT/HXT 325A	402273 403094	15102 15245
TXT/HXT 405A	402285 403125	339 332
TXT/HXT 409A TXT/HXT 415A TXT/HXT 425A	402142 403102	26118 26283
TXT/HXT 505A	402266 403073	350A 352
TXT/HXT 509B TXT/HXT 515B TXT/HXT 525B	402266 403073	350A 352
TXT605	402123 403009	3975 3926
TXT/HXT 609 TXT/HXT 615 TXT/HXT 625	402197 403091	396 3920
TXT705	402078 403034	JH307749 JH307710
TXT/HXT 709 TXT/HXT 715 TXT/HXT 725	402088 403047	455 452

Parts for TXT / HXT 3A, 4A & 5B Straight Bore and Taper Bushed Speed Reducers



<u> </u>		No.	TXT3A	TXT4A	ТХТ5В
Ref.	Name of Part	Req'd		HXT4A	HXT5B
12	Backstop Assembly	1	243106	244106	
	Housing ★	1	243534	244567	245587
ŝ	Air Vent	1	241237	241237	245237
16	Housing Bolt	6	411440	411442	411464
18	Adapter Housing Bolt	2	411442	411444	411466
19	Washer § †	4	419094		419096
20	Lock Washer	6	419012		
22	Hex Nut	8	407089	407089	407091
24	Dowel Pin	2	420055	420055	420110
300	Pipe Plug	2	430031	430031	430033
21	Magnetic Plug	1	430060		
21	C'shaft Bearing Cover	1	243559	244574	244574
26	(Backstop Side) C'shaft Cover Screw	4	416504	411035	4.1704
27	Lock Washer	4	416524 419007	419009	411394
28	Input Shaft Seal Carrier	1	243543	244577	419009 245597
30*	Inp Shft Brg Shim Pack	2‡	389704	389711	389732
32	Carrier/Cover Screws	+	411390	411407	411407
33	Lock Washer	+	419010	419011	419011
34	Backstop Cover	1	243560	244493	
38	Backstop Cover Screw	4	416524	411035	411406
39	Lock Washer	4	419007	419009	419009
40*	Input Shaft 9:1 Ratio	1	243549	244579	245599
	with Pinion 15:1 Ratio		243550	244580	245600
	25:1 Ratio		243551	244581	245601
41	Input Shaft Key	lil	443032	443082	443113
	Input Bearing Kit ★	1	389587	389590	389594
44*	∆ Input Shaft Bra Cone		402204	402280	402144
45*	≜ (Input Side) Cup		403139	403027	403104
46*	▲ Input Shaft Brg Cone	i	402273	402142	402266
47*	▲ (Backstop Side) Cup	1	403094	403102	403073
	Countershaft 9:1 Ratio	1	389729	389730	389731
	Assembly ★ 15:1 Ratio	1	389700	389707	389714
	25:1 Ratio	1	389701	389708	389715
48	A C'shaft with Pinion	1	243555	244590	245596
50*	≨ First 9:1 Ratio	1	243237	244482	245582
	Reduction 15:1 Ratio	1	243238	244214	245214
	Gear 25:1 Ratio	1	243239	244212	245212
52*	▲ Key	1	243215	244215	244215
	Countershaft Brg Kit ★	1	389588	389591	389595
54*	A Countershaft Brg Cone	1	402273	402000	402203
55*	▲ (Input Side) Cup	1	403094	403000	403027
56*	▲ Countershaft Brg Cone	1	402273	402000	402203
57*	▲ (Backstop Side) Cup	1	403094	403000	403027
58	C'shaft Brg Cover	1	243545	244578	245594
E0+	(Input Shaft)		700705	7007.5	7007:-
59*	C'shaft Brg Shim Pack	2‡	389705	389712	389718
	Output Hub Straight	1	389702	389709	389716
60+	Assembly ★ Topered		389703		
00-	▲ Output Hub Straight	!	243557		245591
62*	Tapered	1	243556	244588	245590
64*	å Output Gear å Output Gear Key	1	243570	244188	245186
68		1	389733 243572	391015	391026
70	Output Hub Collar □ Collar Screw □	2	400098	244658 400150	245598
72	Bushing Backup Plate	2	243308	244099	400154 245114
74	Retaining Ring	2	421109	421108	421107
76	Output Hub Seal Carrier	1	243547	244591	245592
	(Input Side)	'	240047	244091	240092
	Output Hub Bra Kit *	1	389589	389592	389596
80*	à Output Hub Cone	2	402272	402268	402193
81*	▲ Bearing Cup	2	403127	403163	403016
82*	Output Hub Bearing	2 ‡	389706	389713	389719
	Shim Pack	- 7	300,00	300710	333713
			-		
*	Includes parts listed imm				• , #

*	includes	parts listed immediately below marked "A".
	Housing	assembly includes a two-piece housing.
	Bushing	assembly includes 2 bushings.

Makes up assembly under which it is listed.

Ref.	Name of Part	No.	TXT3A	TXT4A	TXT5B
-	Seal Kit ★	Req'd	HXT3A 389720	389721	HXT5B
36*	▲ Backstop Cvr Gasket	l ¦	243561	244593	389722 245220
42*	à Input Shaft Seal	1	243558	244524	355011
78*	▲ Output Hub Seal	2	243578	244673	245545
Ş	RTV Sealant, Tube	1	465044	465044	465044
	Bushing 1-5/16" Bore	1	243282		
	Assembly 1-3/8" Bore	1	243284		
	★ 1-7/16" Bore	1	243260	244079	
	1-1/2" Bore	1	243262	244081	
	1-5/8" Bore	1	243264	244083	
	1-11/16" Bore	1	243268	244085	
84	1-3/4" Bore	1	243266	244087	
	1-7/8" Bore	1	243270	244089	245084
	1-15/16" Bore 2" Bore	1	243272	244093	245086
		1	243274	244095	245088
		1	243276	244109	245000
	2-3/16" Bore 2-1/4" Bore	1	243276	244111 244113	245090 245092
	2-7/16" Bore	i		244115	245094
	2-1/2" Bore	i			245099
	2-11/16" Bore	1			245110
	2-15/16" Bore	i			245112
86	A Bushing Screw	6	411407	411408	411435
88	A Lock Washer	6	419011	419011	419012
	1-5/16" Bore	1	443264		
	1-3/8" Bore	1	443264		
	1-7/16" Bore	1	443265	443254	
	1-1/2" Bore	1	443265	443254	
	1-5/8" Bore	1	443265	443254	
	1-11/16" Bore	1	443266	443254	
	Key, △ 1-3/4" Bore	1	443266	443254	
90	Bushing 1-7/8" Bore	1	443267	443255	443251
	to 1-15/16" Bore	1	443269	443255	443251
	Shaft 2" Bore	1	443268	443255	443251
	2-1/8" Bore 2-3/16" Bore	1	447070	443258	447051
	2-3/16" Bore 2-1/4" Bore	1	443270	443259	443251
	2-7/16" Bore	i		443260 443261	443251 443243
	2-1/2" Bore	i			443244
	2-11/16" Bore	1			443245
	2-15/16" Bore	1			443250
	Key, ▲	10	443262		443202
	Bushing 2-3/16"-	1		443257	
ĝ	to 2-1/2" Bore				
	Output 2-7/16"-	1		443257	
	Hub 3" Bore				
	Torque-Arm Assembly ★	1	243097	245097	245097
94	A Rod End	1	243245	245245	245245
96	A Hex Nut	1	407095	407097	407097
	▲ Turnbuckle	1	243246	245246	245246
100		1	243247	245247	245247
	▲ LH Hex Nut ▲ Fulcrum	1	407244	407246	407246
	▲ Fulcrum ▲ Fulcrum Screw	1	243249	246249	246249
	A Hex Nut	1	411484	411484	411484
110	Adapter Assembly *	1	407093 259153	407093 259154	407093 259155
112	A RH Adapter Plate	1	243242	244244	245242
114	▲ LH Adapter Plate	i	243241	244243	245241
116	▲ Adapter Bushing	i	243243	245243	245243
	▲ Adapter Bolt	ì	411437	411460	411460
	A Lock Washer	1	419012	419013	419013
122	▲ Hex Nut	i	407089	407091	407091
	Motor Adapter 15:1 Ratio	1	243539	244572	245606
	25:1 Ratio	1	243541	244572	245607
126	Adapter Screw	φ	417081	417108	415023
	Lock Washer	1	419046	419047	
	Input Shaft 15:1 Ratio with Pinion 25:1 Ratio	1	243553	244583	245603

On size TXT/HXT 3A for 1-15/16" thru 1-3/4" bores and TXT/HXT 5B for 1-7/16" thru 2-1/4" bores.
 → 4 req'd on HXT3A & HXT4A; 5 req'd on HXT5B.

Not shown on drawing.

Washer is used on housing bolts at dowel pin locations.

Straight Bore only.

Taper Bushed only.

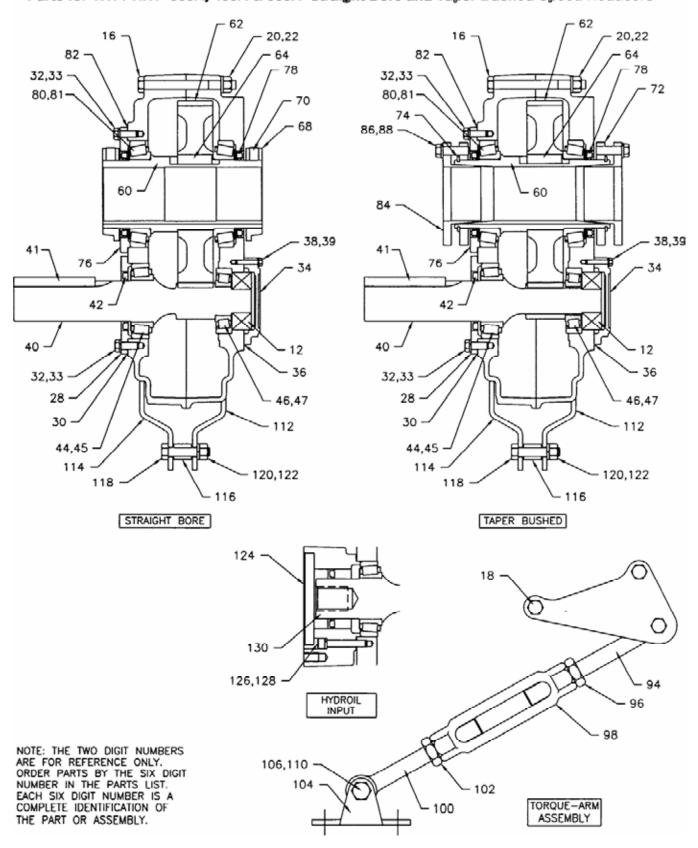
See last paragraph under "Ordering Parts".

14 req'd on TXT3A & TXT4A; 15 req'd on TXT5B;

10 req'd on HXT3A, HXT4A & HXT5B.

Recommended spare parts.

Parts for TXT / HXT 305A, 405A & 505A Straight Bore and Taper Bushed Speed Reducers



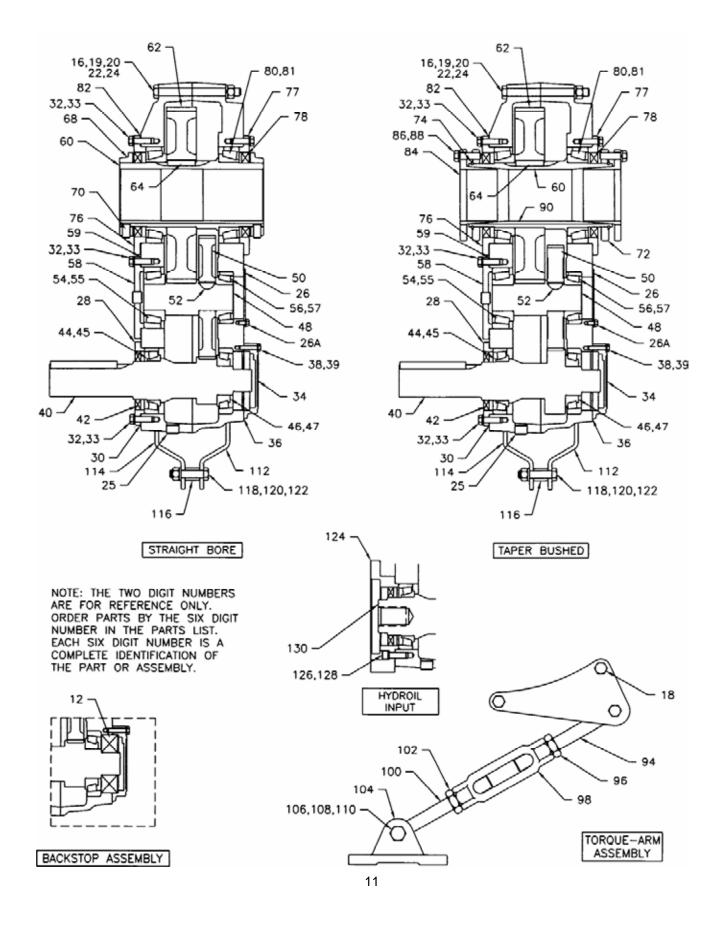
<u> </u>		No.	TXT305A	TXT405A	TXT505A
Ref.	Name of Part		HXT305A		
12	Backstop Assembly	1	252101	244148	246101
	Housing	1	253165	254218	255216
§	Air Vent	1	241237	241237	245237
16	Housing Bolt	6	411440	411442	411464
18	Adapter Housing Bolt	2	411442	411444	411466
19	Washer §†	4	419094	419094	419096
20	Lock Washer	6	419012	419012	419013
22	Hex Nut	8	407089	407089	407091
24	Dowel Pin	2	420055	420055	420110
§	Pipe Plug	2	430031	430031	430033
§	Magnetic Plug	1	430060	430060	430062
28	Input Shaft Seal Carrier	1	253177	254224	255224
30*	Inp Shft Brg Shim Pack	2‡	389723	389724	389725
32	Carrier/Cover Screws	+	411390	411407	411407
33	Lock Washer	+	419010	419011	419011
34	Backstop Cover	1	253175	254223	255019
38	Backstop Cover Screw	4	416524	411035	411406
39	Lock Washer	4	419007	419009	419009
40*	Input Shaft	1	253170	254230	255221
	with Pinion				
41	Input Shaft Key	1	443078	443096	443113
44*	▲ Input Shaft Brg Cone	1	402190	402179	402270
45*	▲ (Input Side) Cup	1	403132	403006	403026
46*	▲ Input Shaft Brg Cone	1	402271	402285	402266
47*	A (Backstop Side) Cup	1	403101	403125	403073
	Output Hub Straight	1	389702	389709	389716
	Assembly ★ Tapered	1	389703	389710	389717
60*	▲ Output Hub Straight	1	243557	244589	245591
	Tapered	1	243556	244588	245590
62*	▲ Output Gear	1	243570	244188	245186
64*	▲ Output Gear Key	1	389733	391015	391026
68	Output Hub Collar 🗆	2	243572	244658	245598
70	Collar Screw =	4	400098	400150	400154
72	Bushing Backup Plate ■	2	243308	244099	245114
74	Retaining Ring ■	2	421109	421108	421107
76	Output Hub Seal Carrier	1	243547	244591	245592
	(Input Side)				
	Output Hub Brg Kit *	1	389589	389592	389596
80*	▲ Output Hub Cone		402272	402268	402193
81*	▲ Bearing Cup	2 2 ‡	403127	403163	403016
82*	Output Hub Bearing	2‡	389706	389713	389719
L	Shim Pack				
	Seal Kit ★	1	389720	389721	389722
36*	▲ Backstop Cvr Gasket	1	243561	244593	245220
42*	▲ Input Shaft Seal	1	243558	355011	355011
78*	▲ Output Hub Seal	2	243578	244673	245545
§	RTV Sealant, Tube	_ 1	465044	465044	465044

*	includes	parts liste	d immed	iately	below	marked	" ≜".
	Housing	assembly	includes	a two	-piece	housing	
	Bushing	assembly	includes	2 bus	hings	•	

- Makes up assembly under which it is listed.
- Not shown on drawing.
- † Washer is used on housing bolts at dowel pin locations.
- ☐ Straight Bore only.
 Taper Bushed only.
- ‡ See last paragraph under "Ordering Ports". + 10 req'd on 305A; 12 req'd on 405A & 505A.
- 10 req d on 305A; 12 req d on 405A & 505A.
 Recommended spare parts.
 On size 305A for 1-15/16" thru 1-3/4" bores.
 On size 405A for 1-7/16" thru 1-7/8" bores.
 On size 505A for 1-7/8" thru 2-1/4" bores.
 On size 405A for 1-15/16" and 2" bores.

Bushing 1-5/16" Bore 1 243282 244103 245082 244081 243264 244083 244083 244083 244083 244083 244083 244083 244083 244083 244083 244083 244083 244083 244083 244083 244083 244084 244083 244084 244083 244084 244085 244084 244085 244084 244085 244084 244085 244084 244085 244084 244085 244084 244085 245084 244113 245086 22-1/8" Bore 1 243272 244083 245084 244113 245090 2-1/16" Bore 1 243276 244111 245090 2-1/16" Bore 1 244113 245090 2-1/16" Bore 1 244113 245090 2-1/16" Bore 1 245110 2-1/16" Bore 1 245110 2-1/16" Bore 1 443264 245110 2-1/16" Bore 1 443264 245110 2-1/16" Bore 1 443265 443254 1-1/16" Bore 1 443266 443254 443266 443254 1-1/16" Bore 1 443266 443254 443266 443254 443266 443254 443266 443254 443266 443254 443266 443254 443266 443254 443266 443254 443266 443254 443266 443254 443266 443254 443266 443254 443266 443254 443266 443254 443266 443254 443266 443254 443266 443254 443266 443254 443266 443				No.	TXT305A	TYTAOSA	TYTEOSA
Bushing 1-5/16" Bore 1 243282	Ref.	Name of Part					
# 1-3/8" Bore 1 243284	\vdash	Bushing 1-5/16"	Bore			-~	
## 1-7/16" Bore			_				
1-1/2" Bore 1 243262 244081			_			244079	
1-5/8" Bore 1				1			
84				1			
1-17/8" Bore 1 243270 244089 245084 245086 2-18" Bore 1 243272 244095 245086 2-1/8" Bore 1 243276 244109 2-5090 2-7/16" Bore 1 2-3/76" Bore 2-7/16" Bore 2-1/2" Bore 2-11/16" Bore 2-15/16" Bore 2-15/16" Bore 1 244115 245094 245094 2-15/16" Bore 1 245112 245094 245094 2-15/16" Bore 1 245112 245094 2450				1			
2 Bore 2 Bore 2 243272 244093 245086 245088 245088 245088 245088 245092 244111 245090 244113 245090 24716" Bore 2-1/4" Bore 2-1/16" Bore 2-1/16" Bore 2-1/16" Bore 2-1/16" Bore 2-1/16" Bore 1 245110 245090 245116 88 A Lock Washer 6 411407 411408 411435 419011 419011 419012 419013 419012 419013 419013 419012 419013	84	1-3/4"	Bore	1	243266	244087	
2 Bore 1 243274 244095 245088 2-1/8" Bore 2 2-3/16" Bore 2 243276 244113 245090 2-1/4" Bore 2 244115 245094 2-1/2" Bore 2 244115 245094 2-11/16" Bore 1 245110 245094 2-11/16" Bore 1 245110 245094 2-11/16" Bore 1 245110 245094 245110 2-15/16" Bore 1 245110 245094 245110 2-15/16" Bore 1 245110 245094 245110 2-15/16" Bore 1 443264 245110 245094 245110 2-15/16" Bore 1 443264 245110 245094 2450		1-7/8"	Bore	1	243270	244089	245084
2-1/8" Bore 2-3/16" Bore 2-1/4" Bore 2-1/4" Bore 2-1/4" Bore 2-1/4" Bore 2-1/4" Bore 2-1/4" Bore 2-1/2" Bore 2-11/16" Bore 2-15/16" Bore 1			Bore	1	243272	244093	245086
2-3/16" Bore 2-1/4" Bore 2-7/16" Bore 2-1/2" Bore 2-11/16" Bore 1			Bore	1	243274		245088
2-1/4" Bore 2-7/16" Bore 2-1/2" Bore 2-11/16" Bore 1			Bore				
2-7/16 Bore 2-11/16 Bore 1	i		_		243276		
2-11/16" Bore 2-15/16" Bore 1							
2-11/16" Bore 1 245110 2-15/16" Bore 1 245112 38"			_				
88			_			l	
86				1			
88	96		Bore	_	411407	411400	
1-5/16" Bore 1		•					
1-3/8" Bore 1 443264	-00		Poro	_		419011	419012
1-7/16" Bore 1 443265 443254 1-1/2" Bore 1 443265 443254 1-11/16" Bore 1 443265 443254 143266 443254 143266 443254 143266 443254 143266 443254 143266 443254 143266 443255 443251 12 12 12 12 13 13 12 13 13							
1-1/2" Bore 1-5/8" Bore 1-5/8" Bore 1-11/16" Bore 1-13/4" Bore 1-13/4" Bore 1-15/16"						443254	
1-5/8" Bore 1 443265 443254							l
1-11/16" Bore 1 443266 443254			_				l
Key, A							
90 Bushing 1-7/8" Bore to 1-15/16" Bore Shoft 2" Bore 1 443269 443255 443251 2-1/8" Bore 1 2-3/16" Bore 1 2-1/4" Bore 2-1/4" Bore 1 2-7/16" Bore 1 2-1/2" Bore 1 2-1/2" Bore 1 2-1/2" Bore 1 2-1/2" Bore 1 2-1/16" Bore 1 2-11/16" Bore 1 2-15/16" Bore 1 2-2-15/16" Bore 1 243245 245097 245099 24509							
to 1-15/16" Bore 1 443269 443255 443251 2-1/8" Bore 1 2-3/16" Bore 1 443270 443258 443251 2-1/4" Bore 1 2-7/16" Bore 1 2-1/2" Bore 1 2-1/2" Bore 1 2-11/16" Bore 1 2-11/16" Bore 1 2-11/16" Bore 1 2-15/16" Bore 1 2-2-15/16" Bore 1 2-2-15/16" Bore 1 2-3250 245245 245245 245245 245245 245245 245245 245245 245245 245245 245245 245245 245245 245245 245246	90			ì			443251
Shaft 2" Bore 1 443268 443255 443251 2-3/16" Bore 2-1/4" Bore 1 443260 443251 2-1/2" Bore 1 443261 443244 2-11/16" Bore 1 443261 443244 2-11/16" Bore 1 443261 2-15/16" Bore 1 443245 2-15/16" Bore 1 443250 2- 443250 2- 443250 2- 443250 2- 443250 2- 2- 443250 2- 2- 443250 2- 2- 2- 2- 2- 2- 2- 2- 2- 2- 2- 2- 2-	"						
2-1/8" Bore 1							
2-3/16" Bore 2-1/4" Bore 1				1			
2-1/4" Bore 2-7/16" Bore 1			Bore	1	443270		443251
2-1/2" Bore 2-11/16" Bore 1				1			443251
2-11/16" Bore 2-15/16" Bore 1		2-7/16"	Bore	1		443261	443243
2-15/16* Bore 1			Bore				443244
\$ A Key, Bushing to Output Hub							
Output Hub 1 φ 443257 1 Torque-Arm Assembly ★ 1 243097 245097 245097 245097 245097 245097 245097 245097 245097 245097 245097 245097 245097 245245 245245 245245 245245 245245 245246 245246 245246 245246 245246 245246 245247 245247 245247 245247 245247 245247 245247 245247 245247 245247 246249 <t< td=""><td></td><td></td><td>Bore</td><td></td><td></td><td></td><td></td></t<>			Bore				
Torque—Arm Assembly ★ 1 243097 245097 245097 94 A Rod End 1 243245 245245 245245 245245 245245 245245 245246 245246 245246 245246 245246 245246 245246 245246 245246 245246 245247 245247 245247 245247 245247 245247 245247 245247 245249 2462	8				443262		443202
94	<u> </u>				247007		045007
96		, ,	ly 🛪				
98							
100					1		
102							
104							
106 ≜ Fulcrum Screw 1 411484 411484 411484 110 ≜ Hex Nut 1 407093 407093 407093 Adapter Assembly ★ 1 259153 259154 259155 112 ≜ RH Adapter Plate 1 243242 244244 245242 114 ≜ LH Adapter Plate 1 243241 244243 245241 116 ≜ Adapter Bushing 1 243243 245243 245243 118 ≜ Adapter Bolt 1 411437 411460 411460 120 ≜ Lock Washer 1 419012 419013 419013 122 ≜ Hex Nut 1 407089 407091 407091 124 Motor Adapter 1 253172 254222 255226 126 Adapter Screw 1 417090 417120 417120 128 Lock Washer 1 419046 419047 419047 130* Input Shaft 1 253171 254231 255222							
110		1					
Adapter Assembly ★ 1 259153 259154 259155 112				1 :			
112 A RH Adapter Plate 1 243242 244244 245242 114 A LH Adapter Plate 1 243241 244243 245241 116 A Adapter Bushing 1 243243 245243 245243 118 A Adapter Bolt 1 411437 411460 411460 120 A Lock Washer 1 407089 407091 407091 122 A Hex Nut 1 407089 407091 407091 124 Motor Adapter 1 253172 254222 255226 126 Adapter Screw 1 417090 417120 417120 128 Lock Wosher 1 419046 419047 419047 130* Input Shoft 1 253171 254231 255222	<u> </u>			-			
114 ▲ LH Adapter Plate 1 243241 244243 245241 116 ▲ Adapter Bushing 1 243243 245243 245243 118 ▲ Adapter Bolt 1 411437 411460 411460 120 ▲ Lock Washer 1 419012 419013 419013 122 ▲ Hex Nut 1 407089 407091 407091 124 Motor Adapter 1 253172 254222 255226 126 Adapter Screw 1 417090 417120 417120 128 Lock Wosher 1 419046 419047 419047 130* Input Shoft 1 253171 254231 255222	112						
116 ▲ Adapter Bushing 1 243243 245243 245243 118 ▲ Adapter Bolt 1 411437 411460 411460 120 ▲ Lock Washer 1 419012 419013 419013 122 ▲ Hex Nut 1 407089 407091 407091 124 Motor Adapter 1 253172 254222 255226 126 Adapter Screw 1 417090 417120 417120 128 Lock Washer 1 419046 419047 419047 130* Input Shoft 1 253171 254231 255222		A LH Adapter Plate		1			
118							245243
120							411460
122 A Hex Nut 1 407089 407091 407091 124 Motor Adapter 1 253172 254222 255226 126 Adapter Screw 1 417090 417120 417120 128 Lock Washer 1 419046 419047 419047 130* Input Shaft 1 253171 254231 255222		▲ Lock Washer					419013
124 Motor Adapter 1 253172 254222 255226 126 Adapter Screw 1 417090 417120 417120 128 Lock Washer 1 419046 419047 419047 130* Input Shaft 1 253171 254231 255222				1			407091
126 Adapter Screw 1 417090 417120 417120 128 Lock Washer 1 419046 419047 419047 130* Input Shaft 1 253171 254231 255222	124			1	253172		255226
128 Lock Wosher 1 419046 419047 419047 130* Input Shoft 1 253171 254231 255222							417120
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	128	Lock Washer			419046	419047	419047
with Pinion	130*	F		1	253171	254231	255222
		with Pinion			L		

Parts for TXT / HXT 6 & 7 Straight Bore and Taper Bushed Speed Reducers



		No.	TXT6	TXT7
Ref.	Name of Part	Reg'd		HXT7
12	Backstop Assembly	1	246092	247260
	Housing ★	1	246170	247180
14	A LH Housing	1		
15	A RH Housing	1		
ş	Air Vent	1	245237	390061
16	Housing Bolt	6	411466	411498
18	Adapter Housing Bolt	2	411468	411499
19	Washer	2	419096	419082
20	Lock Washer	8	419013	419016 407095
24	Hex Nut Dowel Pin	8	407091 420112	420128
\ \{\}	Pipe Plug	2 2	430033	430035
25	Magnetic Plug	1	430053	430055
26	C'shaft Bearing Cover	1	246015	247011
20	(Backstop Side)	'	240010	247011
26A	C'shaft Cover Screws	6	411394	411394
	C'shaft Cover Washers	6	419009	419009
28	Input Shaft Seal Carrier	1	246184	247320
30*	Inp Shft Brg Shim Pack	2	391164	390420
32	Carrier/Cover Screws	+	411408	411433
33	Lock Washer	+	419011	419012
34	Backstop Cover	1	246221	247221
38	Backstop Cover Screw	6	411404	411402
39	Lock Washer	6	419009	419009
40*	Input Shaft 9:1 Ratio	1	246481	247479
	with Pinion 15:1 Ratio	1	246290	247370
	25:1 Ratio	1	246291	247371
41	Input Shaft Key §	1	443113	443127
44*	Input Shaft Brg Cone		402196	402150
45* 46*	(Input Side) Cup Input Shaft Brg Cone	1	403091 402197	403106 402088
47*	(Backstop Side) Cup	1 ' 1	403091	402088
1	Countershaft 9:1 Ratio	1	392140	392141
	Assembly ★ 15:1 Ratio	l i l	391171	391196
	25:1 Ratio	1 1	391186	391197
48	▲ C'shaft with Pinion	1	246294	247002
50*	▲ First 9:1 Ratio	1	246482	247478
	Reduction 15:1 Ratio	1	246292	247008
	Gear 25:1 Ratio	1	246293	247005
52*	≜ Key	1_	245218	247218
54*	Countershaft Brg Cone	1	402054	402256
55*	(Input Side) Cup		403159	403053
56*	Countershaft Brg Cone	1	402052	402256
57*	(Backstop Side) Cup		403142	403053
58	C'shaft Brg Cover (Input Shaft)	1	246185	247194
59*	C'shaft Brg Shim Pack	2‡	391165	390429
	Output Hub Straight	1	390988	390429
	Assembly ★ Tapered		390935	390990
60*	▲ Output Hub Straight		246338	247338
~	Tapered	1	246269	272137
62*	△ Output Gear	1	246295	247215
64*	△ Output Gear Key	2	245217	245217
68	Output Hub Collar =	2	246309	247309
70	Collar Screw =	4	400154	400190
72	Bushing Backup Plate ■	2	246270	272138
74	Retaining Ring ■	2	421055	421099
76	Output Hub Seal Carrier	1	246187	247315
	(Input Side)			
77	Output Hub Seal Carrier	1	246186	247315
00+	(Backstop Side)		400	
80*	Output Hub Cone	2	402050	402058
81*	Bearing Cup	2	403140	403111

*	Includes	parts lis	ted	immed	dia	tely	below	marked
	Bushing	assembly	y in	cludes	2	bus	hinas.	

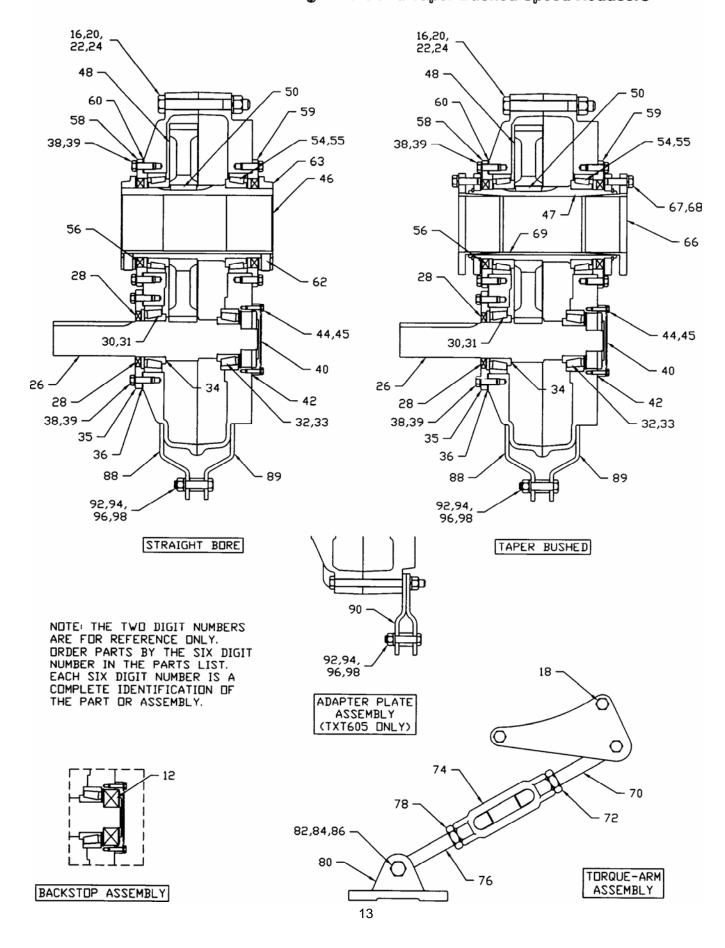
Makes up assembly under which it is listed.

Ref.	Name of Part	No,	TXT6	TXT7
82*	Output Hub Bearing	Req'd	HXT6	HXT7
02*	Shim Pack	2‡	391187	390444
\vdash	Seal Kit ★	1	246340	247345
36*	▲ Backstop Cvr Gasket	1	246220	246220
42*	≜ Input Shaft Seal	1	242210	242210
78*	≜ Output Hub Seal	2	246310	247310
9	RTV Sealant, Tube	1	465044	465044
	Bushing Assembly ★			
	2-3/16" Bore	1	246261	
	2-1/4" Bore	1	246262	070105
	2-7/16" Bore 2-1/2" Bore	1	246263 246264	272125 272149
	2-1/2 Bore 2-11/16" Bore	1	246265	272149
84	2-13/16" Bore	1		272130
"	2-7/8" Bore	1	246266	272131
	2-15/16" Bore	1	246267	272132
	3" Bore	1	246283	272133
	3-3/16" Bore	1		272134
	3-7/16" Bore	1	246268	272135
	3-15/16" Bore	1		272136
86	≜ Bushing Screw	6 0	411435	411456
88	△ Lock Washer	6	419012	419013
1	2-3/16" Bore 2-1/4" Bore	1	443211 443211	
	Z-1/4 Bore Key, ≜ 2-7/16" Bore	1	443211	443248
90	Bushing $2-1/2$ " Bore	1	443214	443248
"	to 2-11/16" Bore	1	443238	443248
	Shaft 2-13/16" Bore	1		443199
	2-7/8" Bore	1	443236	443199
	2-15/16" Bore	1	443237	443199
	3" Bore	1	443252	443216
	3-3/16" Bore	1		443235
	3-7/16" Bore	1	443213	443217
	3-15/16" Bore Key, \(\text{\Lambda} \) 2-3/16"-	1		443218
8	Bushing $2-1/2$ " Bore	1	443212	
"	to 2-7/16"-	'	440212	
	Output 3" Bore	1 1		443198
	Torque-Arm Assembly ★	1	246097	247098
94	▲ Rod End	1	245245	247239
96	A Hex Nut	1	407097	407099
98	≜ Turnbuckle	1	245246	247246
100	≜ Extension	1	245247	247240
102	≜ LH Hex Nut ≜ Fulcrum	1	407246 247248	407248 247248
104	▲ Fulcrum ▲ Fulcrum Screw	1	411489	411489
108	▲ Lock Washer	1	419014	419014
110	A Hex Nut	1	407093	407093
	Adapter Assembly *	1	259156	259157
112	▲ RH Adapter Plate	1	246242	247242
114	A LH Adapter Plate	1	246241	247241
116	A Adapter Bushing	1	245243	247244
118	▲ Adapter Bolt	1	411460	411489
120	A Lock Washer	1	419013	419014
122	A Hex Nut	1	407091	407093
124 126	Motor Adapter Adapter Screw	6	246465 417108	247464 417141
128	Lock Washer	6	419013	419014
130*	Input Shaft 15:1 Ratio	1	246230	247463
	with Pinion 25:1 Ratio	1	246286	247462

See last paragraph under "Ordering Parts". Straight Bore only. Taper Bushed only. 24 req'd on TXT6; 28 req'd on TXT7. Recommended spare parts.

Not shown on drawing.

Parts for TXT 605 & 705 Straight Bore and Taper Bushed Speed Reducers



Housing ★	47260 47184 90061 11498 11499 19082 19016
Housing ★	47184 90061 11498 11499 19082
\$ Air Vent	90061 11498 11499 19082
16 Housing Bolt 18 Adapter Housing Bolt 2 411468 4 § Washer 20 Lock Washer 21 Hex Nut 22 Hex Nut 24 Dowel Pin 25 Pipe Plug 26 Housing Bolt 2 420112 42 27 Houself Plug 2 430033 43 28 RTV Sealant, Tube 26 Input Shaft 26 Input Shaft 27 Houself Brg 30 Input Shaft Brg 31* (Input Side) 31* (Input Side) 32* Input Shaft Brg 31* (Input Side) 33* (Backstop Side) 34* Input Bearing Spacer 35 Input Shaft Seal Carrier 36 Input Shaft Seal Carrier 36 Input Shaft Seal Carrier 36 Input Shaft Brg 39 Lock Washer 39 Lock Washer 40 Backstop Cover Gasket ♥ 1 246220 40 Backstop Cover Screw 41 Backstop Cover Screw 44 Backstop Cover Screw 45 Lock Washer 46 A Output Hub Straight 47* Tapered 48* △ Output Gear 48* △ Output Gear	11498 11499 19082 19016
18	11499 19082 19016
§ Washer 2 419096 4 20 Lock Washer 8 419013 4 22 Hex Nut 8 407091 40 24 Dowel Pin 2 420112 42 § Pipe Plug 2 430033 43 25 Magnetic Plug § 1 430062 43 § RTV Sealant, Tube 1 465044 46 26* Input Shaft 1 256028 25 with Pinion § Input Shaft 8rg Cone 1 391979 33 31* (Input Side) Cup 1 390333 33 32* Input Shaft Brg Cone 1 390450 33 33* (Backstop Side) Cup 1 391980 33 34* Input Bearing Spacer 1 256030 35* Input Shaft Seal Carrier 1 246184 25 36* Inp Shft Brg Shim Pack 2 ‡ 391164 33 38 Carrier Screws + 411408 43 39 Lock Washer + 419011 43 * Seal Kit 1 272705 24 40 Backstop Cover Gasket ♥ 1 246220 24 41 Backstop Cover Gasket ♥ 1 246220 24 42 Backstop Cover Gasket ♥ 1 246220 24 43 Backstop Cover Gasket ♥ 1 246220 24 44 Backstop Cover Gasket ♥ 1 246220 24 45 Lock Washer 1 246338 24 46* △ Output Hub Straight 1 390935 33 46* △ Output Gear 1 246295 25	19082 19016
20	19016
22 Hex Nut 24 Dowel Pin 2 420112 42 § Pipe Plug 2 430033 43 25 Magnetic Plug § 1 430062 43 § RTV Sealant, Tube 1 465044 46 26* Input Shaft with Pinion § Input Shaft 1 256028 25 Magnetic Plug § 1 43013 44 30* Input Shaft 1 256028 25 Magnetic Plug § 1 443113 44 30* Input Shaft Rey 1 443113 44 30* Input Shaft Brg Cone 1 391979 35 31* (Input Side) Cup 1 390333 35 32* Input Shaft Brg Cone 1 390450 35 33* (Backstop Side) Cup 1 391980 35 34* Input Bearing Spacer 1 256030 35* Input Shaft Seal Carrier 1 246184 25 36* Inp Shft Brg Shim Pack 2 ‡ 391164 35 38 Carrier Screws + 411408 44 39 Lock Washer + 419011 44 42 Backstop Cover Gasket ♥ 1 246220 24 40 Backstop Cover Gasket ♥ 1 246220 24 40 Backstop Cover Gasket ♥ 1 246221 22 40 Backstop Cover Gasket ♥ 1 246221 24 44 Backstop Cover Screw 6 411404 44 45 Lock Washer	
24 Dowel Pin	
\$ Pipe Plug	20128
25 Magnetic Plug § 1 430062 4. § RTV Sealant, Tube 1 465044 46 26* Input Shaft 1 256028 25 with Pinion § Input Shaft Key 1 443113 44 30* Input Shaft Brg Cone 1 391979 35 31* (Input Side) Cup 1 390333 35 32* Input Shaft Brg Cone 1 390450 35 33* (Backstop Side) Cup 1 391980 35 34* Input Bearing Spacer 1 256030 35 Input Shaft Seal Carrier 1 246184 25 36* Inp Shft Brg Shim Pack 2 ‡ 391164 35 38 Carrier Screws + 411408 45 39 Lock Washer + 419011 45 * Seal Kit 1 272705 24 40 Backstop Cover Gasket ♥ 1 246220 24 40 Backstop Cover Gasket ♥ 1 246221 25 40 Backstop Cover Screw 6 411404 45 45 Lock Washer 6 419009 45 Assembly ★ Tapered 1 390935 35 46* △ Output Hub Straight 1 246269 25 48* △ Output Gear 1 246269 25 48* △ Output Gear 1 246295 26	30035
§ RTV Sealant, Tube 1 465044 46 26* Input Shaft 1 256028 25 with Pinion § Input Shaft Key 1 443113 44 30* Input Shaft Brg Cone 1 391979 35 31* (Input Side) Cup 1 390333 35 32* Input Shaft Brg Cone 1 390450 35 33* (Backstop Side) Cup 1 391980 35 34* Input Bearing Spacer 1 256030 35 Input Shaft Seal Carrier 1 246184 25 36* Inp Shft Brg Shim Pack 2 ‡ 391164 35 38 Carrier Screws + 411408 45 39 Lock Washer + 419011 45 * Seal Kit 1 272705 24 40 Backstop Cover Gasket ♥ 1 246220 24 40 Backstop Cover Gasket ♥ 1 246220 24 44 Backstop Cover Screw 6 411404 45 45 Lock Washer 6 419009 45 Assembly ★ Tapered 1 390988 35 46* △ Output Hub Straight 1 246338 24 47* Tapered 1 246269 25 48* △ Output Gear 1 246295 24	30064
26* Input Shaft with Pinion § Input Shaft Key 1 443113 44 30* Input Shaft Brg Cone 1 391979 39 31* (Input Side) Cup 1 390333 39 32* Input Shaft Brg Cone 1 390450 39 33* (Backstop Side) Cup 1 391980 39 34* Input Bearing Spacer 1 256030 39 35 Input Shaft Seal Carrier 1 246184 29 36* Inp Shft Brg Shim Pack 2 ‡ 391164 39 38 Carrier Screws + 411408 49 39 Lock Washer + 419011 49 * Seal Kit 1 272705 24 40 Backstop Cover Gasket □ 1 246220 24 40 Backstop Cover Gasket □ 1 246221 29 40 Backstop Cover Screw 6 411404 49 45 Lock Washer 6 419009 49 Output Hub Straight 1 390988 39 46* △ Output Hub Straight 1 390935 39 46* △ Output Hub Straight 1 246338 29 47* Tapered 1 246269 29 48* △ Output Gear 1 246295 29	65044
with Pinion 1 443113 4431313 4431313 4431313 4431313 4431313 4431313 4431313 4431313 4431313 4431313 4431313 4431431 4431431 4431431 4431431 4431431 4431431 4431431 4431431 4431444 4431444 4431444 4444 <td>57044</td>	57044
\$ Input Shaft Key	,,044
30*	43127
31* (Input Side)	91964
32* Input Shaft Brg Cone 1 390450 33 33* (Backstop Side) Cup 1 391980 33 34* Input Bearing Spacer 1 256030 35 Input Shaft Seal Carrier 1 246184 25 36* Inp Shft Brg Shim Pack 2	91972
33* (Backstop Side)	
34* Input Bearing Spacer 1 256030 35 Input Shaft Seal Carrier 1 246184 25 36* Inp Shft Brg Shim Pack 2 ‡ 391164 39 38 Carrier Screws + 411408 4 39 Lock Washer + 419011 4 * Seal Kit 1 272705 24 42 Backstop Cover Gasket ♥ 1 246220 24 40 Backstop Cover Gasket ♥ 1 246221 24 44 Backstop Cover Screw 6 411404 44 45 Lock Washer 6 419009 44 Output Hub Straight Assembly ★ Tapered 1 390935 33 46* A Output Hub Straight Tapered 1 246338 24 47* Tapered 1 246269 25 48* A Output Gear 1 246295 25	91981
35	91982
36* Inp Shft Brg Shim Pack 2	
38 Carrier Screws + 411408 4 39 Lock Washer + 419011 4 * Seal Kit 1 272705 24 42 Backstop Cover Gasket ♥ 1 246220 24 40 Backstop Cover 1 246221 24 44 Backstop Cover Screw 6 411404 4 45 Lock Washer 6 419009 4 Output Hub Straight 1 390988 39 Assembly ★ Tapered 1 390935 39 46* ▲ Output Hub Straight 1 246338 24 47* Tapered 1 246269 25 48* ▲ Output Gear 1 246295 24	57045
39 Lock Washer + 419011 4 * Seal Kit 1 272705 24 42 Backstop Cover Gasket ♥ 1 246220 24 40 Backstop Cover 1 246221 24 44 Backstop Cover Screw 6 411404 44 45 Lock Washer 6 419009 4 Output Hub Straight 1 390988 39 Assembly ★ Tapered 1 390935 39 46* ▲ Output Hub Straight 1 246338 24 47* Tapered 1 246269 25 48* ▲ Output Gear 1 246295 24	90420
* Seal Kit 42 Backstop Cover Gasket ♥ 1 246220 24 40 Backstop Cover	11433
42 Backstop Cover Gasket ♥ 1 246220 24 40 Backstop Cover 1 246221 24 44 Backstop Cover Screw 6 411404 44 45 Lock Washer 6 419009 44 Coutput Hub Straight 1 390988 33 Assembly ★ Tapered 1 390935 33 46* ▲ Output Hub Straight 1 246338 24 47* Tapered 1 246269 23 48* ▲ Output Gear 1 246295 24	19012
40 Backstop Cover 1 246221 2: 44 Backstop Cover Screw 6 411404 4: 45 Lock Washer 6 419009 4: Output Hub Straight 1 390988 3: Assembly ★ Tapered 1 390935 3: 46* ▲ Output Hub Straight 1 246338 2: 47* Tapered 1 246269 2: 48* ▲ Output Gear 1 246295 2:	47345
44 Backstop Cover Screw 6 411404 4 45 Lock Washer 6 419009 4 Output Hub Straight 1 390988 39 Assembly ★ Tapered 1 390935 39 46* △ Output Hub Straight 1 246338 24 47* Tapered 1 246269 25 48* △ Output Gear 1 246295 24	46220
45 Lock Washer 6 419009 4 Output Hub Straight 1 390988 39 Assembly ★ Tapered 1 390935 39 46* △ Output Hub Straight 1 246338 29 47* Tapered 1 246269 29 48* △ Output Gear 1 246295 29	47221
Output Hub Straight 1 390988 39 Assembly ★ Tapered 1 390935 39 46* ▲ Output Hub Straight 1 246338 29 47* Tapered 1 246269 29 48* ▲ Output Gear 1 246295 29	11402
Assembly ★ Tapered 1 390935 39 46*	19009
46*	90990
47* Tapered 1 246269 27 48* A Output Gear 1 246295 29	90941
48* A Output Gear 1 246295 24	47338
	72137
	47215
50* A Output Gear Key 2 245217 24	45217
	43147
(Max. Bore)	
54* Output Hub Cone 2 391935 39	91962
	90666
	47315
(Input Side)	
	47315
(Backstop Side)	
	90444
Shim Pack	
	00190
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
	17300 l
65 Retaining Ring 1 2 421055 42	47309 72138

Ref.	Name of Part	No. Req'd	TXT605	TXT705
	Bushing Assembly ★ ■	neq u		
ŀ	2-3/16" Bore	1	246261	
	2-1/4" Bore	1	246262	
	2-7/16" Bore	1	246263	272125
	2-1/2" Bore	1	246264	272149
i	2-11/16" Bore	1	246265	272143
66	2-13/16" Bore	1		272130
"	2-7/8" Bore	1 1	246266	272131
1	2-15/16" Bore	1	246267	272132
İ	3" Bore	lil	246283	272133
	3-3/16" Bore	l i l		272134
ł	3-7/16" Bore	1	246268	272135
İ	3-15/16" Bore	i		272136
67	A Bushing Screw ■	6	411435	411456
68	à Lock Washer ■	6	419012	419013
1	2-3/16" Bore	1	443211	
	2-1/4" Bore	1 1	443211	
	Key, ≜ 2-7/16" Bore	1	443214	443248
	Bushing 2-1/2" Bore	i	443214	443248
	to 2-11/16" Bore	1 1	443238	443248
69	Shaft 2-13/16" Bore	1 1		443199
	2-7/8" Bore	1	443236	443199
	2-15/16" Bore	1	443237	443199
1	3" Bore	1	443252	443216
	3-3/16" Bore	1 1		443235
	3-7/16" Bore	1 1	443213	443217
	3-15/16" Bore	1		443218
	Key, ≜ 1-15/16"-			
§	Bushing 2-1/2" Bore	1	443212	
	to 2-7/16"-			
1	Output 3" Bore	1		443198
	Torque-Arm Assembly ★	1	246097	247098
70	▲ Rod End	1	245245	247239
72	A Hex Nut	1	407097	407099
74	∆ Turnbuckle	1 1	245246	247246
76	≜ Extension	1 1	245247	247240
78	A LH Hex Nut	1	407246	407248
80	≜ Fulcrum	1	247248	247248
82	A Fulcrum Screw	1	411489	411489
84	▲ Lock Washer	1	419014	419014
86	& Hex Nut	1	407093	407093
	Adapter Assembly ★	1	259159	259157
88	▲ RH Adapter Plate	1		247242
89	▲ LH Adapter Plate	1 1		247241
90	▲ Adapter Plate Ass'y	1	256096	
92	▲ Adapter Bushing	1	245243	247244
94	▲ Adapter Bolt	1	411460	411488
96	▲ Lock Washer	1 1	419013	419014
98	▲ Hex Nut	1	407091	407093

[★] Includes parts listed immediately below marked Housing assembly includes a two-piece housing.
Bushing assembly includes 2 bushings.
Makes up assembly under which it is listed.

Not shown on drawing.

[♡] Included in Seal Kit.

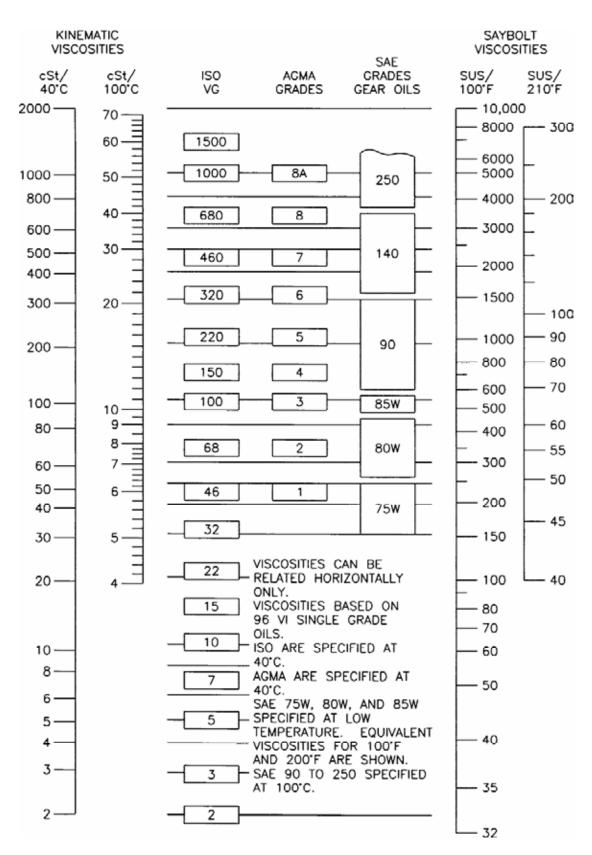
See last paragraph under "Ordering Parts".

Straight Bore only.
Taper Bushed only.

¹⁸ req'd on TXT605; 22 req'd on TXT705.

Recommended spare parts.

OIL VISCOSITY EQUIVALENCY CHART





World Headquarters

 $P.O.\ Box\ 2400,\ Fort\ Smith,\ AR\ 72902-2400\ U.S.A.,\ Ph:\ (1)\ 479.646.4711,\ Fax\ (1)\ 479.648.5792,\ International\ Fax\ (1)\ 479.648.5895$

Baldor - Dodge

6040 Ponders Court, Greenville, SC 29615-4617 U.S.A., Ph: (1) 864.297.4800, Fax: (1) 864.281.2433

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